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Agenda Overview

Day 2

- ▶ EO Directives:
 - ▶ Use Water More Wisely
- ▶ Overview of Report components
- ▶ Next Steps
 - ▶ Technical Workshops
 - ▶ Next UAG meeting Oct. 20 (Sacramento)
 - ▶ Other?



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Project Team

USE WATER MORE WISELY

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Executive Order Directives

- ▶ EO 1: SWRCB adjust emergency conservation regulations through the end of 2017, develop proposal to achieve a mandatory reduction that builds off 25% previous conservation targets

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Executive Order Directives

- ▶ EO 2: DWR shall work with the Water Board to develop new water use targets as part of a permanent framework for urban water agencies
 - ▶ Shall build upon the existing state law requirements that the state achieve a 20% reduction in urban water usage by 2020.
 - ▶ Shall be customized to the unique conditions of each water agency

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Executive Order Directives

- ▶ EO 2: (Cont.)
 - ▶ Shall generate more statewide water conservation than existing requirements
 - ▶ Shall be based on strengthened standards for:
 - ▶ Indoor residential per capita water use
 - ▶ Outdoor irrigation, in a manner that incorporates landscape area, local climate, and satellite imagery data
 - ▶ Commercial, industrial, and institutional (CII) water use
 - ▶ Water lost through leaks

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Executive Order Directives

- ▶ EO 3: DWR and SWRCB shall permanently require urban water suppliers to issue a monthly report on their water usage, amount of conservation achieved, and enforcement efforts.

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EO State Agencies Implementation

- ▶ EO 1: adopt emergency conservation regulations
- ▶ EO 1: develop proposal for revised conservation regulations
- ▶ EO 2: develop framework for setting proposed water use targets
- ▶ EO 2: propose strengthened efficiency standards, and timeline for achieving those standards.
- ▶ EO 3: Establish reporting procedures and requirements; reduce or avoid duplicative reporting

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SUMMARY OF
WATER USE
TARGET
WORKSHOPS

OVERVIEW OF
TECHNICAL
WORKGROUP
PROPOSAL

EO Directive #2 In Depth

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- ▶ Standard
 - ▶ A metric used to indicate a level of water-use efficiency
 - ▶ Example: GPCD, evapotranspiration adjustment factor
- ▶ Budget
 - ▶ The volume (or GPCD) calculated from a standard
 - ▶ Example: the indoor residential budget = standard x pop. x days in a year
- ▶ Target
 - ▶ The sum of all budget volumes
 - ▶ Unique to each supplier

EO B-37-16 Action #2

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- ▶ Directs State agencies to establish a long term framework for new water use targets based on water budgets calculated from standards for 4 sectors
 - ▶ Indoor residential
 - ▶ Outdoor irrigation
 - ▶ CII
 - ▶ Distribution System Loss

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Why a Water Budget Approach?

- ▶ Accounts for landscape area and climate (Eto)
- ▶ Results in a customized water use target for each supplier
- ▶ Builds upon existing requirements
- ▶ Takes into account previous water use efficiency efforts- does not require a baseline.

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Indoor Residential

- ▶ Indoor residential standard
 - ▶ Expressed in gallon per capita per day (GPCD)
- ▶ Proposed Indoor Residential Budget formula:
 - ▶ Population x standard (GPCD) x days in a year
- ▶ Resulting budget can be expressed as either a volume or GPCD

M.Cubed Study

- ▶ Current nationwide use: 59 GPCD (M-cubed)
 - ▶ Additional studies will help confirm current indoor use
- ▶ Plumbing codes and appliance upgrades will further lower indoor water use through 2040
- ▶ Residential
 - ▶ Will decrease by 6.1 GPCD by 2030
 - ▶ Will decrease by 7.5 GPCD by 2040

Stakeholder Feedback

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- ▶ Current indoor residential water use likely lower than 59 GPCD- set initial standard lower than 55 GPCD
- ▶ Others thought 55 GPCD was a good place to start
- ▶ Concern expressed over low sewer flows and potential lack of water for recycling.
- ▶ Allow adjustments for service areas with high numbers of evaporative coolers, livestock and medical devices

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Outdoor Water Use Budget

$(ETAF) \times (\text{Landscape Area}) \times (ETo) = \text{volume}$

ETAF is the Evapotranspiration Adjustment Factor

- = landscape plant factor/Irrigation Efficiency
- Used to quantify the type of planting and the level of water use in a landscape

Model Water Efficient Landscape Ordinance(MWELO) uses ETAF to establish water budgets for landscapes

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Supplier Service Area Outdoor Water Standard and Budget

- ▶ Sum of outdoor water budgets for individual parcels or aggregate service area
- ▶ Account for different ETo's and ETAF
- ▶ Provisional standard based on ETAF's
 - ▶ Pre 2010 landscapes 0.8
 - ▶ 2010 to 2015 0.7
 - ▶ Post 2015 0.55 Residential
 0.45 Commercial
 - ▶ Special Landscapes 1.0
- ▶ State will review additional data from pilot study, and set final standards late in 2018 to be met by 2025 to meet conditions of EO Directive #2 to exceed current standards.

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Workshop Questions

- ▶ Irrigated or Irrigable area?
- ▶ Which landscapes should be included?
 - ▶ Recycled water landscapes
 - ▶ Mixed meter CII
 - ▶ Raw Water

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Stakeholder Feedback on Outdoor Irrigation

- ▶ General preference for irrigable area
- ▶ Suggestion made to average or combine ETAFs for existing landscape to simplify the calculation
- ▶ Concern expressed that low outdoor irrigation standards could require suppliers to mandate landscape conversion or to prohibit some types of landscape
- ▶ A variety of approaches were suggested for recycled water use

Commercial, Industrial and Institutional (CII) Sector Budgets

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- ▶ Difficult to establish water budgets due to the wide range of water use
- ▶ SB X7-7 Method 2 standard was a 10 % reduction from the SB X7-7 baseline
- ▶ Presented three approaches to technical workgroup

Technical Workgroup Discussion on CII

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- ▶ Option 1: Provisional standard
 - ▶ Example: percentage reduction from 2020 baseline
- ▶ Option 2: Performance Measure Approach
 - ▶ Classification of CII water use
 - ▶ Dedicated meters for landscapes over certain size
 - ▶ Water audits and/or management plans for CII water users over certain size
- ▶ Option 3: Suppliers self-assess potential CII reductions and establish their own unique standard for their service area

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Here's what we heard

- ▶ Recognition that CII is complicated, unlikely to be addressed by a top-down approach
 - ▶ No clear consensus on CII standard, each option received some support
 - ▶ Recognition that metrics for individual industries or business were unsuitable
 - ▶ CII task force report

Water Loss

- ▶ SB 555 applies only to urban water suppliers
- ▶ DWR currently developing rules for validations of water loss audits
- ▶ Annual water loss audit data submission to DWR beginning October 2017
- ▶ State Water Board rulemaking to set water loss standards completed in 2020

Revised Approach: Indoor Residential

- ▶ SB7-7 set existing standard as 55 GPCD
- ▶ Propose standard:
 - ▶ Provisional standard of 55 GPCD
 - ▶ Revise downward in 2018, based on additional studies, to be achieved by 2025.
- ▶ State will reevaluate in 2025 to reassess 2030 standard

Revised Approach: Outdoor Irrigation

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- ▶ Conduct pilot study with 30 agencies to determine landscape area and average irrigation rates.
- ▶ 2017- measure landscape area statewide
- ▶ 2018-based on landscape area measurement programs establish initial (2021) and 2025 standards
- ▶ Standards based on irrigable area

Revised Approach: Commercial, Industrial and Institutional (CII)

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- ▶ Proposed approach: Establish performance measures
 - ▶ All dedicated irrigation accounts will be on a budget using outdoor standards
 - ▶ Require classification (NAICS) by (2021), develop benchmarks.
 - ▶ Require all mixed meter accounts to split off landscape greater than a size threshold to dedicated irrigation accounts (or equivalent technology) by 2021.
 - ▶ Audits and water management plans for reporting efficiency in CII water use. Audits and plans for subset of CII customers, based on volume, percentage, or number.
 - ▶ CII reporting requirements

Water Loss

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- ▶ SB 555 Standards
- ▶ Will include real and apparent losses

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Water Use Target Calculation

Targets calculated by adding the volume or GPCD from sector budgets, but not CII

<u>Sector</u>	<u>Budget (vol.)</u>	<u>Budget (GPCD)</u>
Indoor Residential	4,570,744	55
Outdoor Landscape	3,729,166	44
<u>Water Loss</u>	<u>530,560</u>	<u>7</u>
TARGET	8,830,470 (CCF)	106 (GPCD)

Compliance Volume= Total Production- CII Mixed Meter Deliveries

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Reporting, Compliance, Enforcement

- ▶ Progress reports beginning in 2019
- ▶ Full compliance in 2025 reporting period, as documented in 2026 compliance report and 2025 UWMP update (submitted in July 2026)
 - ▶ Water Board enforcement
- ▶ State agencies are developing methods to encourage compliance from 2021 through 2025.
- ▶ Timeline (following slides)

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Initial Proposed Timeframe

- ▶ 2017
 - ▶ State framework report to be released January 2017
 - ▶ Framework contains provisional standards for indoor, outdoor, CII
 - ▶ State agencies begin pilot project to map, provide outdoor landscape area data to supplier

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Initial Proposed Timeframe

- ▶ 2018
 - ▶ DWR releases technical guidance document on water budget target reporting and compliance
 - ▶ All suppliers receive land use area data from DWR by summer of 2018
 - ▶ State agencies finalize indoor, outdoor, and CII 2025 standards
 - ▶ All final standards will be developed through a public process
 - ▶ State Agencies provide technical assistance

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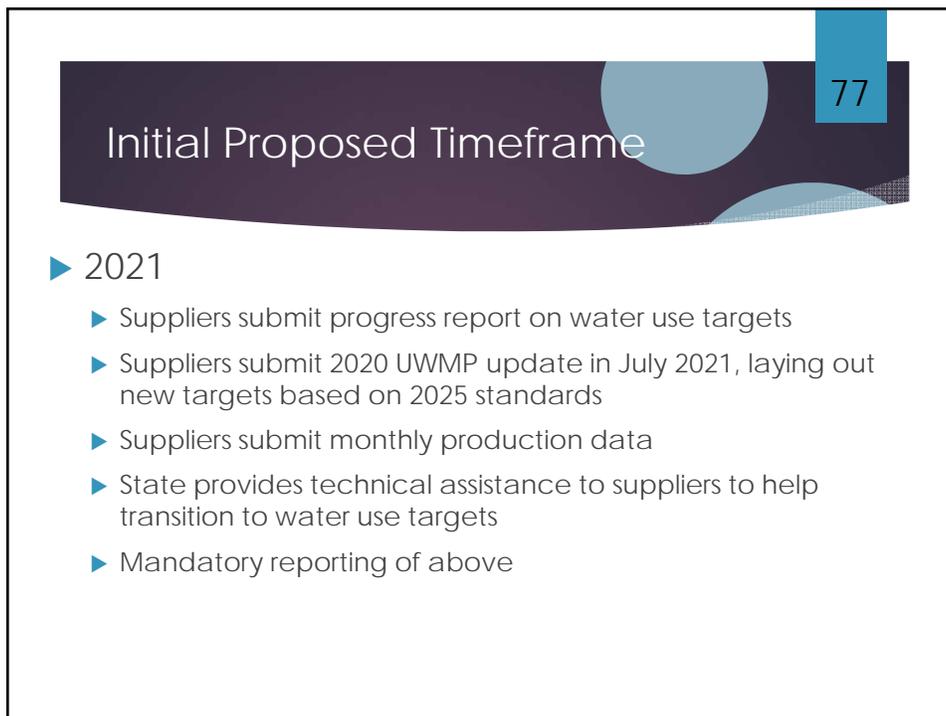
Initial Proposed Timeframe

- ▶ 2019
 - ▶ Within six months of receiving land use area data, or by April 1st (whichever comes later), suppliers submit a report (supplemental UWMP) to DWR detailing:
 - ▶ Calculation of 2018 provisional targets, based on interim standards and 2018 production data
 - ▶ A narrative description of whether the supplier is meeting their provisional target for 2018
 - ▶ A narrative description of what actions the supplier will take to ensure that targets are met by 2025
 - ▶ Water loss standard set by State Water Board
 - ▶ State agencies provide technical assistance

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Initial Proposed Timeframe

- ▶ 2020
 - ▶ Suppliers submit progress report on water use targets
 - ▶ Suppliers submit monthly production data to the Water Board
 - ▶ State continues to provide technical assistance to suppliers



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Initial Proposed Timeframe

- ▶ 2021
 - ▶ Suppliers submit progress report on water use targets
 - ▶ Suppliers submit 2020 UWMP update in July 2021, laying out new targets based on 2025 standards
 - ▶ Suppliers submit monthly production data
 - ▶ State provides technical assistance to suppliers to help transition to water use targets
 - ▶ Mandatory reporting of above



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Initial Proposed Timeframe

- ▶ 2022-2025
 - ▶ Suppliers submit compliance report on water use targets
 - ▶ Suppliers submit monthly production data
 - ▶ State provides technical assistance to suppliers to help transition to water use targets
 - ▶ Mandatory reporting of above
 - ▶ State reevaluates existing standards, revises for 2030. Reevaluation of standards occurs every 5 years thereafter.

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Initial Proposed Timeframe

- ▶ 2026
 - ▶ Suppliers submit compliance report on water use targets
 - ▶ Suppliers that do not meet 2025 targets are subject to enforcement by SWRCB (as evaluated in 2026 compliance report)
 - ▶ SWRCB enforcement could include:
 - ▶ Information Orders
 - ▶ Conservation Orders
 - ▶ Cease & Desist Orders
 - ▶ Administrative Civil Liability penalties (fines)
 - ▶ Enforcement from state would only occur at the supplier level
 - ▶ Ongoing technical assistance

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Seeking Feedback

- ▶ Interest in Board workshop related to proposal for future conservation regulations (EO 1).
- ▶ Board Information Item at October 5th Board meeting on EO implementation.
- ▶ **CII Technical Advisory Group to review implementation of performance measures, CII classification, and benchmark development**

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Report



Making Conservation a Way of Life
Implementing Executive Order B-37-16
January 15, 2017



Cover image for illustrative purposes only.

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Report Outline

- Chapter 1. Introduction
- Chapter 2. Water Conservation in California
- Chapter 3. Making Conservation a Way of Life in California
- Chapter 4. Directives that Will be Implemented Within Existing Authority
- Chapter 5. Recommendations that Require Additional Authority for Implementation
- Chapter 6. Framework for Implementation



Making Conservation a Way of Life
Implementing Executive Order B-37-16
January 15, 2017





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Report Schedule

Aggressive Schedule

- ▶ Public Draft: November 4, 2016
- ▶ Public Comments Due: November 14, 2016
- ▶ Final: January 10, 2017 (mandated date)